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BEFORE THE STATE OF WASHINGTON
ENERGY FACILITY SITE EVALUATION COUNCIL

IN RE APPLICATION NO. 99-1

EXHIBIT _____ (JW-RT)

SUMAS ENERGY 2 GENERATION
FACILITY

APPLICANT'S PREFILED REBUTTAL TESTIMONY

WITNESS : JOHN WONG

Q. Please reintroduce yourself to the Council.

A. My name is John Wong. I am a wetlands biologist with Bexar Consulting, Ltd. Together with other professions, I have been responsible for evaluating the wetland impacts of the proposed Sumas Energy 2 (SE2) project and for developing SE2's wetland mitigation proposal. I provided pre-filed direct testimony in early May 2000, and have been actively involved in SE2's efforts to resolve concerns about wetlands raised by the Washington Department of Fish and Wildlife (WDFW) and the Washington Department of Ecology (WDOE).

EXHIBIT _____ (JW-RT)
JOHN WONG'S
PREFILED REBUTTAL TESTIMONY - 1

[31742-0001/John Wong Rebuttal.doc]

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1 **Q. Have you reviewed the prefiled testimony of Curt Leigh (WDFW) and Erik**
2 **Stockdale (WDOE)?**
3

4 **A. Yes.**
5
6

7 **Acreage of Wetlands Impacted**
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9 **Q. In their testimony, both Mr. Leigh and Mr. Stockdale contend that SE2's**
10 **Application for Site Certification does not identify all of the wetlands on the**
11 **project site and that 1995 wetland delineation by David Evans & Associates is**
12 **inadequate. What is your response to their contention?**
13
14

15 **A. Mr. Stockdale's and Mr. Leigh's disagreement with SE2's original identification of**
16 **wetlands on the project site focuses on our reliance on the determination of the**
17 **Natural Resource Conservation Service (NRCS) and the U.S. Army Corps of**
18 **Engineers (ACOE) that a majority of the site to be filled is "prior converted cropland"**
19 **(PCC) and therefore, not a wetland. In the Application, we relied upon that**
20 **determination, and we did not attempt to determine whether or not the PCC lands had**
21 **wetland characteristics. We determined that the Project, as it was originally**
22 **conceived, would impact 1.9 acres of wetlands. As I explained in my prefiled direct**
23 **testimony, we subsequently modified the design of the stormwater detention ponds at**
24 **the request of EPA. This modification provided more mitigation by giving the**
25 **detention ponds more wetland attributes, but also required somewhat more filling of**
26 **existing wetlands at the site. Neither Mr. Stockdale and Mr. Leigh have expressed any**
27 **disagreement with the delineation of wetlands on the non-PCC areas of the project**
28 **site.**
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1 **But Mr. Leigh and Mr. Stockdale do disagree with the decision not to include**
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4 **response to their testimony in this regard?**
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7 A. tant to understand how that PCC designation fits within the broader
8 regulatory context. The federal Clean Water Act gives the U.S. Army Corps of
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13 and SE2 applied to the Corps for the Clean Water Act Section 404 permits it will need
14 to authorize the filling of wetlands at the site. The Corps of Engineers has developed
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19 We followed the Corps' regulations and guidance in delineating the wetlands at the
20 site, and those regulations and guidance exclude areas designated as prior converted
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23

25 **Q. I understand that you followed the Corps' rules in applying for the Corps**
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31 A. Yes. In Washington State, the fill of wetlands is also regulated pursuant to the
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34 shoreline master plans that are approved by WDOE. In delineating the wetlands,
35 therefore, we also consulted the City of
37
38 that the proposed fill and mitigation plan would comply with the City's Shoreline
40 Master Plan. A copy of the
41
43 Sumas dated March 2, 1999 is provided as Exhibit ____ (JW-3).
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47

EXHIBIT ____ (JW-RT)

1 **Q. Mr. Leigh and Mr. Stockdale contend that WDOE also regulates PCC lands that**
2 **have wetland characteristics. Has that been true in your experience?**
3

4
5 A. As I understand it, there is currently a legal dispute about whether WDOE has
6 authority to do so in the Section 401 Certification process. I am not a lawyer, so I do
7 not want to get into the details of that dispute, but I can say that in my 10 years of
8 experience working on projects in Washington State, WDOE has not generally sought
9 to regulate PCC lands. Nor am I aware that WDOE has ever informed the general
10 public of its intention to do so through any formal manner, such as public notices or
11 public meetings.
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21 **Q. At page 8 of his testimony, Mr. Leigh dismisses the “prior converted cropland”**
22 **designation as a “regulatory” label. Do you agree with his characterization?**
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25 A. Yes and no. The PCC designation is a regulatory designation, just as the "wetland" is
26 a regulatory designation defined in the 1987 Corps Manual and the Washington State
27 Wetland Delineation Manual. The PCC designation originated with the NRCS to
28 identify certain lands in which the vegetation and hydrology have been manipulated for
29 the purpose of growing crops. These lands have typically been drained artificially with
30 drain tiles and/or ditching. The PCC designation is intended to acknowledge the
31 manipulated condition of these agricultural lands. As a result of their manipulated
32 conditions, these lands do not have the same functions and value as naturally occurring
33 wetlands.
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45 **Q. Putting aside for a moment the dispute about whether or not PCC lands can be**
46 **wetlands, both Mr. Leigh and Mr. Stockdale contend that they observed**
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1 wetlands in the PCC areas of the site, and Mr. Leigh testified at pages 5-6 that if
3 the “wetland” areas of the PCC lands were included, the project would impact
4
6 their testimony?
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9 A. Mr. Leigh means by “significantly,” but during April and May, I
10 went back out to the project site and made more observations, dug soil samples and
12
13 the site. My analysis is discussed in much greater detail in the *Wetland Delineation &*
16 *Sumas Energy 2, Inc. Electric Generating Plant Facility*
18 (June 26, 2000), which is Exhibit ____ (JW-4). If we assume that it is appropriate to
19
21 the total “wetland” acreage impacted by the fill at the project site would be 8.76 acres.
22
24 (____ Table 6-1 of Exhibit ____ (JW-4)).
25

27 I understand that Mr.
28
30 followed a period of above-normal rainfall and, therefore, his observations were not
31
33 representative of normal conditions at the site. David Evans & Associates (DEA),
34
36 through April of 1995 and October 10, 1995. I have also observed the site on
37
39 numerous occasions, including December 1995, January 18, 1996, and May 3, 6, 17
40
42 have resulted in an accurate wetland delineation. As Mr. Stockdale testified,
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45
46 fortunate to observe the site on numerous and varied occasions. This is important

1 because wetland hydrology requires that areas be saturated at the surface for 5% to
2 12.5% of the growing season, which is 12 to 30 days (and I believe the upper end of
3 that spectrum is more appropriate for this type of site). Our numerous observations
4 have allowed us to assess the duration of saturation in a manner that Mr. Stockdale's
5 and Mr. Leigh's single visits to the site have not.
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13 **Function of Wetlands Impacted**
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15 **Q. At pages 3-6, Mr. Stockdale describes the functions and values of wetlands and**
16 **the potential ramifications of lost wetlands. Do you agree with his testimony?**
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19 **A.** I agree that wetlands have the potential to provide numerous wildlife and hydrologic
20 functions, as do nonwetland areas. Not all wetlands, however, provide each of the
21 functions Mr. Stockdale mentions, either as a result of their landscape position or prior
22 disturbance. In particular, the ability of the wetlands at the SE2 project site to provide
23 significant function has been compromised by the agricultural manipulations on the
24 land, i.e. clearing, plowing, ditching, draining and fertilization.
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33 **Q. With respect to the wetlands at the project site, Mr. Stockdale states, at page 13**
34 **of his testimony, that the agricultural activity at the site has removed the native**
35 **vegetation and disturbed the soil. He concludes that "wetland functions related**
36 **to a diverse, native cover of vegetation are absent from the site." Do you agree?**
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41 **A.** Yes. These wetland functions are very limited or absent. For this area and much of
42 western Washington, once land is cleared and placed into agricultural production, it is
43 difficult for it to revert to a condition that existing prior to clearing. This is because
44 invasive grass species tend to quickly dominate fallow agricultural land and exclude
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1 native tree, shrub and grass species. The invasive grass community becomes so dense
2 that it also limits wildlife functions.
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6 **Q. At page 14 of his testimony, Mr. Stockdale also states that "[t]he site is likely**
7 **providing important base flow support to Johnson Creek." Do you agree with**
8 **this statement?**
9

10 **A.** No. This statement is entirely unsupported by data or analysis. This is a hydrology
11 issue that is best addressed by a hydrogeologist, so Burt Clothier will discuss it in
12 greater detail in his rebuttal testimony. In simple terms, these lands have limited ability
13 to store water. To the extent that they do store water following a precipitation event,
14 they then release that water soon afterwards. This means that to the extent that any
15 water is released to provide base flow support for nearby surface waters, that support
16 is provided in the winter and spring, when those surface waters do not need additional
17 base flow support. Ordinarily, when we talk about wetlands providing a base flow
18 support function, we think of water being stored in a wetland and released to surface
19 waters during the dry season when additional flow support might be desirable. This
20 does not occur at the project site.
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36 **Q. Both Mr. Stockdale and Mr. Leigh have testified that the wet areas of the site**
37 **provide habitat for ducks and shorebirds, including killdeer and dunlin. Do you**
38 **agree?**
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42 **A.** I did not accompany Mr. Stockdale and Mr. Leigh on their site visits, so I cannot
43 comment on what birds they observed. I would note, however, that none of the
44 species they mentioned have been designated as endangered, threatened or priority
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1 species. Given the substantial wetland mitigation area SE2 has proposed, together
2 with the extent of similar agricultural land throughout the region, I would not expect
3 that the population of these bird species will be adversely affected by the proposed
4 project. The project site is not specialized habitat, and these birds are adept at
5 relocating.
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13 **Mitigation Proposal**
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15 **Q. At page 9, Mr. Leigh testified that the mitigation plan is inadequate for three**
16 **reasons. First, he says that SE2 has not identified all of the wetlands impacted**
17 **by the project. Do you agree with that criticism?**
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21 **A.** No. As I have explained, our original decision to exclude PCC lands was appropriate.
22 In order to assist the Council in evaluating the PCC issue, however, we have
23 performed additional analysis to identify all "wetlands," regardless of the PCC
24 designation. That additional analysis is found in Exhibit ____ (JW-4).
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31 **Q. Second, Mr. Leigh implies that all wetland impacts are not mitigated because**
32 **SE2 proposed its original mitigation plan when it was contending that only 1.9**
33 **acres of wetlands were being implemented. Do you agree with that criticism?**
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37 **A.** No. In my view, the original mitigation plan is still adequate to mitigate the project's
38 impact given the minimal functions of the wetlands on the site. SE2 originally
39 proposed a 11.5 acre wetland mitigation area that would have provided compensation
40 for anticipated impacts. Nonetheless, SE2 instructed me to consider whether there
41 was a way to provide more wetland mitigation on the site or on immediately adjacent
42 parcels. Section 7.0 of Exhibit ____ (JW- 4) describes the expanded wetland
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an effort to negotiate a stipulation to resolve these issues. SE2 is now proposing this expanded mitigation plan to EFSEC. Under this expanded plan, which is reflected in enhance and preserve a total of 19.41 acres of wetlands and associated buffer area.

	West Area		Forest/Shrub	Total
	4.17 acres	1.82 acres		
Creation	0.99 acres			3.17 acres
Buffer		0.10 acres		0.81 acres
			9.44 acres	9.44 acres
	5.87 acres	4.10 acres		19.41 acres

This proposed mitigation will more than compensate for any adverse impacts to the

Q. How does this expanded mitigation proposal compare to the additional

A. The expanded mitigation plan provides mitigation that is similar to that suggested by

The proposed east mitigation area will have attributes similar to the area

restoration and enhancement opportunities that are near the impact site and that can be permanently protected. The additional ditch/ mitigation area will add habitat and water quality treatment opportunities. The revised

EXHIBIT ____ (JW-RT)

1 stormwater detention system, particularly Cell No. 2, will also provide seasonal open
2 water areas desired by Mr. Leigh for habitat.
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6 **Q. Third, Mr. Leigh testified that the mitigation plan is inadequate because it**
7 **doesn't address the costs of long-term management of mitigation lands. Do you**
8 **agree with this criticism**
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12 **A.** No. Both the original and the expanded wetland mitigation proposals provide for
13 detailed management of the area over a 10-year period, which to my knowledge is at
14 the upper threshold for such types of mitigation required by federal, state or local
15 agencies. Performance standards are included in the plan, and the 10-year period can
16 be extended if the standards are not being met. If the performance standards are met,
17 then the mitigation areas will not require further long-term management. The
18 mitigation plan also includes a contingency plan in the event that the standards cannot
19 be met. All of these measures ensure the long-term management of the site. SE2
20 should not be required to provide funds for the maintenance of sites beyond the 10-
21 year period or the period it takes to achieve the performance standards. Such a
22 requirement would be highly unusual, and is not necessary.
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37 **Q. At pages 14-16, Mr. Stockdale testified in general terms about wetland**
38 **mitigation and mitigation ratios. Do you agree with his testimony?**
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41 **A.** Mr. Stockdale's testimony is very general in nature and I could agree with much of it
42 as a general matter. Whether these generalities apply to a specific situation is another
43 question. With respect to the mitigation ratios in particular, I am not aware of any
44 scientific data that supports the ratios set forth in Mr. Stockdale's table, but I would
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1 point out that Mr. Stockdale agrees that these ratios may be adjusted upward or
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4 is appropriate because of the disturbed condition of the wetlands and PCC lands that
6 will be filled.
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12 1:1 ratio of creation and enhancement will adequately compensate for the lost
13 functions. Mr.
15 wetlands on the site: stormwater retention, surface flow base support, and bird
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18 mitigation proposal. The stormwater detention system has been engineered to address
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21 increasing the linear extent of ditch areas and improving water quality. The wetland
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24 creation and enhancement areas will provide superior wetland habitat for more diverse
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33 Finally, I should note that recommendations for greater than 1:1 mitigation are
34 typically justified by the time it takes for created or enhanced wetlands to become
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39 efforts. Neither factor is relevant here. In this case, the proposed mitigation and
40 stormwater detention system will be functional almost immediately, providing the same
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45 be available immediately, and over time, the wetland creation and enhancement areas
46 will develop more varied and superior habitat than the existing site.

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3 **Q. In his testimony, Mr. Stockdale made some specific criticisms of the mitigation**
4 **plan. First, he expressed concern that the proximity of the wetland creation and**
5 **enhancement to the wetland preservation area might result in a degradation of**
6 **the wetlands being preserved. Do you believe such degradation would occur?**
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11 **A.** No. The proposed mitigation area should not degrade the preserved shrub and forest
12 mitigation area in any way. To the contrary, the existing agricultural activities on the
13 adjacent land may adversely affect these areas by introducing sediments, nutrients,
14 fertilizers and herbicides. There is also an existing drainage ditch located on the east
15 side of the preserved shrub and forest area that has the potential to drain the east edge
16 of the preserved area. In contrast, the proposed mitigation area will compliment and
17 add to the preserved wooded area.
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27 **Q. Mr. Stockdale also expressed concern that the proposal did not contain an**
28 **accurate estimate of site features, clear details design and construction**
29 **narratives, clear measurable performance standards, a monitoring plan, a**
30 **maintenance plan and a contingency plan that would apply if performance**
31 **standards were not met. Are these concerns well-founded?**
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37 **A.** No. Both the original report and the new report addressing the expanded wetland
38 mitigation proposals (JW-4) address objectives, proposed vegetation, soils, hydrology
39 and habitat features, construction sequence, performance standards, monitoring
40 procedures, reporting, site protection and contingency plans. The discussion of these
41 issues is similar to that found in mitigation reports that I have prepared in the past and
42 that WDOE has reviewed and approved.
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2
3 **Q. Stockdale testified that the wetland buffers were not adequate. Do you**
4 **agree?**

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6 No. In my opinion, the proposed buffers are adequate. The existing buffer consists of
7
8 an approximately 25 to 50-foot strip of dense reed canary grass and drainage ditch that
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11 stormwater from another industrial facility, and runoff from the railroad and
12 adjacent lands. No priority, threatened or endangered wildlife species are present.

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17 occlusion and habitat. The proposed mitigation area south of the preserved wetland
18 areas will also provide additional buffer to the site.

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23 **At pages 10-11, Mr. Leigh identifies the plant species that should be used for**
24 **restoration and enhancement. Do you agree with his recommendations?**

25
26 Yes. The proposed vegetation assemblage is listed in the expanded wetland mitigation
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33 **Pipeline & Transmission Routes**

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35 **Q. Stockdale questions the delineation of wetlands along the**
36 **pipeline and transmission line routes in light of his questions about the on-site**

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41 **A.** I don't think Mr.
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43 about the site delineation focuses on whether or not certain PCC lands should be
44 excluded from consideration. To my knowledge, no areas along the pipeline and
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1 wetland delineation on the routes were based upon the 1987 Federal Delineation
2 Manual. Neither Mr. Stockdale nor Mr. Leigh have walked these routes, and to my
3 knowledge, no one has raised any specific objections to the delineation of wetlands
4 along those routes.
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10 **Q. Mr. Stockdale also testified that the impacts associated with the pipeline route**
11 **were underestimated because they were based on an unrealistic 10-foot wide**
12 **construction corridor. Is this true?**
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16 **A.** No. As explained at page 3.4-10 of the Application, SE2 assumed an 80-foot wide
17 area of disturbance along the pipeline route.
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22 **Q. At page 10, Mr. Leigh explains his concerns about wetlands along the pipeline**
23 **and transmission line routes. What is your response to his testimony?**
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26 **A.** Mr. Leigh has merely identified some general principles about avoiding and minimizing
27 impacts to wetlands. This is very similar to the approach we outlined in Section 3.4 of
28 the Application and in the stipulation with WDFW already submitted to the Council.
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33 **Q. Mr. Stockdale testified that SE2 should provide more mitigation for the wetland**
34 **impacts during construction of the transmission line and pipeline. Do you**
35 **agree?**
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38 **A.** No. The impacts to wetlands along the routes are minimal. The majority of the land
39 along the pipeline route is agricultural and is plowed, planted or hayed on an annual
40 basis. Impacts to wetlands will be temporary during construction, and will be
41 minimized by using the mitigation measures outlined in the Application. All wetlands
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2 line route will not be impacted. Poles for transmission lines will be placed outside of
4 wetland areas. The mitigation that is proposed is based on standards required by
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8 sufficient to address the minimal wetland impacts. The proposed work is within the
10 threshold limits authorized by the Corps Nationwide Permit No. 12, which has
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17 **Stormwater Retention Ponds**

19 **Q. gh seemed to question the value of the redesigned**
20 **stormwater detention ponds. Can you address this issue?**

22 Yes. During the public process concerning the Corps of Engineers Section 404
23 permit, the Environmental Protection Agency suggested that we redesign the single
25
26

28 allow sediment to settle out, and water will then flow into the second larger pond.
29

31 The second pond will have a central island, which is desirable from a waterfowl habitat
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34 improvement from a habitat perspective. I addressed the acreage question at the
35 beginning of my testimony. The redesigned ponds are slightly larger, which means
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40 pond also provides a substantial amount of wetland mitigation.
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EXHIBIT ____ (JW-RT)

PREFILED REBUTTAL TESTIMONY 15

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Conclusion

Q. Mr. Stockdale concluded his testimony by stating that "the project will result in a significant loss of wetland acreage." Do you agree?

A. No. In my opinion, the proposed mitigation will result in a net gain in wetland functions. This is due to the disturbed condition of the lands to be affected. The proposed mitigation will provide a significant area of shrubs and trees that is currently absent. The stormwater management facility and the mitigation swale features will adequately replace affected hydrologic functions such as stormwater attenuation. Contribution to stream base flow is minimal or absent at the critical period, therefore, compensation is not required; nonetheless, ditch and swale area is being significantly increased to provide water quality enhancement.

END OF TESTIMONY

I declare under penalty of perjury that the foregoing testimony is true and correct to the best of my knowledge.